

subjecting said first and second semiconductor islands to a thermal oxidization process to form a thermal oxide film on the first and second semiconductor islands wherein said p-type impurity is incorporated into the thermal oxide film formed on said first semiconductor island;

wherein a concentration of said p-type impurity monotonically decreases from a first portion distant from an upper surface of the first semiconductor island to a second portion close to the upper surface in a depthwise direction of the first semiconductor island.

2. (Amended) A method of manufacturing a semiconductor device as claimed in claim 1,

wherein said first semiconductor island constitutes a p-channel semiconductor device;

wherein said second semiconductor island constitutes an n-channel semiconductor device; and

wherein said p-channel semiconductor device and said n-channel semiconductor device are complementarily combined with each other to form a CMOS structure.

6. (Amended) A method of manufacturing a semiconductor device as claimed in claim 1, wherein a thickness of said first semiconductor island is 100 to 1000Å.

32 7. (Amended) A method of manufacturing a semiconductor device as claimed in claim 2, wherein a thickness of said first semiconductor island is 100 to 1000Å.

33 11. (Amended) A method of manufacturing a semiconductor device comprising the steps of:

preparing a semiconductor island comprising crystalline silicon on an insulating surface;

introducing ions of an impurity comprising boron into at least a portion of said semiconductor island without mass separation, wherein said portion is to become a channel region of a thin film transistor; and then

oxidizing a surface of said semiconductor island to form an oxide film so that a part of boron introduced into said semiconductor island is incorporated into said oxide film.

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Please add claims 32 - 63.

--32. The method according to claim 11 wherein said semiconductor device is an electroluminescent display device.

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33. The method according to claim 11 wherein said semiconductor device is a video camera.

34. The method according to claim 11 wherein said semiconductor device is a personal computer.

35. The method according to claim 11 wherein said semiconductor device is a projection system.

36. The method according to claim 11 wherein said semiconductor device is a liquid crystal display device.

37. The method according to claim 11 further comprising a step of forming a gate electrode over said semiconductor island with said thermal oxide film interposed therebetween as a gate insulating film wherein said gate insulating film contains boron at a concentration of 1×10^{17} to $1 \times 10^{20}/\text{cm}^3$.

38. The method according to claim 1 further comprising a step of forming a gate electrode over said first semiconductor

island with said thermal oxide film interposed therebetween as a gate insulating film wherein said gate insulating film contains boron at a concentration of 1×10^{17} to $1 \times 10^{20}/\text{cm}^3$.

39. A method of manufacturing a semiconductor device, comprising the steps of:

forming first and second semiconductor islands on an insulating surface;

introducing ions of a p-type impurity into at least a portion of said first semiconductor island without mass separation wherein said portion is to become a channel region; and

subjecting said first and second semiconductor islands to a thermal oxidization process to form a thermal oxide film on the first and second semiconductor islands wherein said p-type impurity is incorporated into the thermal oxide film formed on said first semiconductor island,

wherein said first semiconductor island constitutes a p-channel thin film transistor and said second semiconductor island constitutes an n-channel thin film transistor.

40. The method according to claim 39 further comprising a step of forming a gate electrode over said first semiconductor

island with said thermal oxide film interposed therebetween as a gate insulating film wherein said gate insulating film contains boron at a concentration of 1×10^{17} to $1 \times 10^{20}/\text{cm}^3$.

41. The method according to claim 39 wherein said semiconductor device is an electroluminescent display device.

42. The method according to claim 39 wherein said semiconductor device is a video camera.

43. The method according to claim 39 wherein said semiconductor device is a personal computer.

44. The method according to claim 39 wherein said semiconductor device is a projection system.

45. The method according to claim 39 wherein said semiconductor device is a liquid crystal display device.

46. The method according to claim 1 wherein said p-type impurity is boron.

47. The method according to claim 39 wherein said p-type impurity is boron.

48. A method of manufacturing a semiconductor device comprising the steps of:

preparing a semiconductor island comprising crystalline silicon on an insulating surface;

introducing ions of an impurity comprising boron into at least a portion of said semiconductor island by plasma doping without mass separation, wherein said portion is to become a channel region of a thin film transistor; and then

oxidizing a surface of said semiconductor island to form an oxide film so that a part of boron introduced into said semiconductor island is incorporated into said oxide film.

49. The method according to claim 48 wherein said semiconductor device is an electroluminescent display device.

50. The method according to claim 48 wherein said semiconductor device is a video camera.

51. The method according to claim 48 wherein said semiconductor device is a personal computer.

52. The method according to claim[/]48 wherein said semiconductor device is a projection system.

53. The method according to claim[/] 48 wherein said semiconductor device is a liquid crystal display device.

54. The method according to claim[/] 48 further comprising a step of forming a gate electrode over said semiconductor island with said thermal oxide film interposed therebetween as a gate insulating film wherein said gate insulating film contains boron at a concentration of 1×10^{17} to $1 \times 10^{20}/\text{cm}^3$.

55. A method of manufacturing a semiconductor device, comprising the steps of:

forming first and second semiconductor islands on an insulating surface;

introducing ions of a p-type impurity into at least a portion of only said first semiconductor island by plasma doping without mass separation wherein said portion is to become a channel region of a thin film transistor; and

subjecting said first and second semiconductor islands to a thermal oxidization process to form a thermal oxide film on

the first and second semiconductor islands wherein said p-type impurity is incorporated into the thermal oxide film formed on said first semiconductor island;

wherein a concentration of said p-type impurity monotonically decreases from a first portion distant from an upper surface of the first semiconductor island to a second portion close to the upper surface in a depthwise direction of the first semiconductor island.

56. A method of manufacturing a semiconductor device as claimed in claim 55,

wherein said first semiconductor island constitutes a p-channel semiconductor device;

wherein said second semiconductor island constitutes an n-channel semiconductor device; and

wherein said p-channel semiconductor device and said n-channel semiconductor device are complementarily combined with each other to form a CMOS structure.

57. A method of manufacturing a semiconductor device as claimed in claim 55, wherein a thickness of said first semiconductor island is 100 to 1000Å.

58. The method according to claim 55 wherein said semiconductor device is an electroluminescent display device.

59. The method according to claim 55 wherein said semiconductor device is a video camera.

60. The method according to claim 55 wherein said semiconductor device is a personal computer.

61. The method according to claim 55 wherein said semiconductor device is a projection system.

62. The method according to claim 55 wherein said semiconductor device is a liquid crystal display device.

63. The method according to claim 55 further comprising a step of forming a gate electrode over said semiconductor island with said thermal oxide film interposed therebetween as a gate insulating film wherein said gate insulating film contains boron at a concentration of 1×10^{17} to $1 \times 10^{20}/\text{cm}^3$.--
